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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,065	07/31/2003	Asif D. Gandhi	10-16-15-24	2044

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Docket Administrator (Room 3J-219)
Lucent Technologies Inc.
101 Crawfords Corner Road
Holmdel, NJ 07733-3030

EXAMINER	
KHAN, SUHAIL	
ART UNIT	**PAPER NUMBER**
2686	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/632,065	GANDHI ET AL.	
	Examiner	Art Unit	
	Suhail Khan	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/2/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-9, 11-17, 19-22 and 24-25 rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. App. Pub. No. 2004/0160914 to Sarkar.

Referring to **claim 1**, Sarkar discloses a method of wireless communication (page 2, paragraph 23, wireless communication system) comprising: evaluating a reverse link loading (page 5, paragraph 50, measures the reverse link pilot quality, congestion) by examining at least two resources within a first time period (page 7, paragraph 71, determination of whether resources are available to accommodate request; page 6, paragraph 60, C/I measurements, power control messages etc); and broadcasting an availability of resources message in response to the evaluated reverse link loading (page 7, paragraph 71, respond to request; also, page 7, paragraph 74, maximum value allowed).

Referring to **claim 2**, Sarkar discloses the method of Claim 1, wherein the step of examining comprises at least one of: examining the at least two resources in use; and examining the at least two resources leftover (page 6, paragraph 60, channel quality indications, C/I measurements, power control messages, control channel messages; two of these resources are interpreted as being in use and the other two as leftover).

Referring to **claim 3**, Sarkar discloses the method of Claim 2, wherein the at least two resources examined comprise at least one a sector loading, total interference, received signal strength indication rise, per-leg and per-call frame error rate, physical channel erasure statistics and distributions, filtered loading estimate, transmit power and power control outer-loop set point compared to received Ecp/Nt (page 6, paragraph 60, channel quality indications, C/I measurements, power control messages, control channel messages).

Referring to **claim 4**, Sarkar discloses the method of Claim 3, wherein the step of evaluating a reverse link loading comprises computing the sector loading by measuring energy in a pilot signal over total noise (page 3, paragraph 36, signal to noise), DRC values (page 6, paragraph 60, control messages), channel gain (page 13, paragraph 120, if independent channel gain then different power level transmission; it is inherent that channel gain is measured) and used Walsh code space (page 3, paragraph 29, available Walsh codes); and the received signal strength indication rise corresponds with a total received power at a sector (page 6, paragraph 61, signal strength estimations such as received pilot power), with a noise floor and with a threshold that varies to minimize adverse control reactions (page 7, paragraph 70, minimum quality of service guarantees, available transmit power, reduce signal to noise ratio).

Referring to **claim 5**, Sarkar discloses the method of Claim 4, comprising: sampling a received signal strength indication (page 15, paragraph 152, various parameters stored, adjusted, determined, fixed); and calculating a noise floor and the received signal strength indication rise in response to the sampling received signal strength indication (page 15, paragraph 152, various parameters stored, adjusted, determined, fixed; page 7, paragraph 70, minimum quality of service guarantees, available transmit power, reduce signal to noise ratio).

Referring to **claim 6**, Sarkar discloses the method of Claim 4, wherein changing a longest idle user to at least one of inactive status and dormant status if a sector state is above a slow control threshold (page 5, paragraph 49, quality of reverse link maintained for active set).

Referring to **claim 7**, Sarkar discloses the method of Claim 6, wherein at least one of: inactivating a user with a maximum number of bytes transferred if all users are active; and changing an access resistance timer if all users are not at least one of active idle and having a maximum number of bytes transferred (page 7, paragraph 72, power required may be high, reduce number, required transmit power of requests; page 7, paragraph 73, conserve forward and reverse link resources).

Referring to **claim 8**, Sarkar discloses the method of Claim 7, wherein the access resistance timer determines if subsequent access attempts by a user after a previous attempt failed (page 7, paragraph 73, conserve forward and reverse link resources; page 4, paragraph 47, failure of transmission).

Referring to **claim 9**, Sarkar discloses the method of Claim 3, wherein the availability of resources message corresponds with at least one of an overload condition, increasing a number of active connections, maintaining the number of active connections, decreasing the number of active connections, increasing an available transmit rate, maintaining the available transmit rate and decreasing the available transmit rate (page 7, paragraph 74, maximum value allowed).

Referring to **claim 11**, Sarkar discloses the method of Claim 9, comprising controlling the reverse link by at least one of: managing a traffic channel in response to an average of the received signal strength indication rise and the filtered loading estimate; and managing the number of active connections in response to the average of the received signal strength indication

rise and the filtered loading estimate (page 6, paragraph 61, scheduling; signal strength estimations, C/I measurements).

Referring to **claim 12**, Sarkar discloses the method of Claim 9, comprising: determining an available transmit rate in response to examining the at least two resources associated with the reverse link within a second time period, the second time period being an order of magnitude greater than the first time period (page 6, paragraph 61, signal strength estimations are made for scheduling, it is inherent that more than one estimation is made at different times).

Referring to **claim 13**, Sarkar discloses a wireless communication system (page 2, paragraph 23, wireless communication system) comprising: a detector for evaluating a reverse link loading (page 5, paragraph 50, measures the reverse link pilot quality, congestion) by examining at least two resources within a first time period (page 7, paragraph 71, determination of whether resources are available to accommodate request; page 6, paragraph 60, C/I measurements, power control messages etc); and a controller for controlling the reverse link loading by broadcasting an availability of resources message in response to the evaluated reverse link loading (page 7, paragraph 71, respond to request; also, page 7, paragraph 74, maximum value allowed).

Referring to **claim 14**, Sarkar discloses the wireless communication system of Claim 13, wherein the detector performs at least one of examining the resources in use within the first time period and examining the resources leftover within the first time period, and the at least two resources examined comprise at least one a sector loading, total interference, received signal strength indication rise, local and global frame error rate and distribution, filtered loading estimate, transmit power, received Ecp/Nt, received Eb/Nt, and power control outer-loop set

point (page 6, paragraph 60, channel quality indications, C/I measurements, power control messages, control channel messages; two of these resources are interpreted as being in use and the other two as leftover).

Referring to **claim 15**, Sarkar discloses the wireless communication system of Claim 14, wherein the detector computes the sector loading by measuring energy in a pilot signal over total noise (page 3, paragraph 36, signal to noise), DRC values (page 6, paragraph 60, control messages), channel gain (page 13, paragraph 120, if independent channel gain then different power level transmission; it is inherent that channel gain is measured) and used Walsh code space (page 3, paragraph 29, available Walsh codes); and the received signal strength indication rise corresponds with a total received power at a sector (page 6, paragraph 61, signal strength estimations such as received pilot power), with a noise floor and with a threshold that varies to minimize adverse control reactions (page 7, paragraph 70, minimum quality of service guarantees, available transmit power, reduce signal to noise ratio).

Referring to **claim 16**, Sarkar discloses the wireless communication system of Claim 15, comprising: a sampler for sampling a received signal strength indication (page 15, paragraph 152, various parameters stored, adjusted, determined, fixed); and a calculator for calculating a noise floor and the received signal strength indication rise in response to the sampling received signal strength indication (page 15, paragraph 152, various parameters stored, adjusted, determined, fixed; page 7, paragraph 70, minimum quality of service guarantees, available transmit power, reduce signal to noise ratio).

Referring to **claim 17**, Sarkar discloses the wireless communication system of Claim 14, the availability of resources message corresponds with at least one of an overload condition,

increasing a number of active connections, decreasing the number of active connections, increasing an available transmit rate, maintaining the available transmit rate and decreasing the available transmit rate (page 7, paragraph 74, maximum value allowed).

Referring to **claim 19**, Sarkar discloses the wireless communication system of Claim 17, comprising: a controller for managing the reverse link by at least one of: controlling a traffic channel transmission rate in response to a relatively short term average of the received signal strength indication rise and the filtered loading estimate; and controlling the number of active connections in response to a relatively long term average of the received signal strength indication rise and the filtered loading estimate (page 6, paragraph 61, scheduling; signal strength estimations, C/I measurements).

Referring to **claim 20**, Sarkar discloses the wireless communication system of Claim 17, wherein the detector determines an available transmit rate in response to examining the at least two resources associated with the reverse link within a second time period, the second time period being an order of magnitude greater than the first time period (page 6, paragraph 61, signal strength estimations are made for scheduling, it is inherent that more than one estimation is made at different times).

Referring to **claim 21**, Sarkar discloses a method of wireless communication (page 2, paragraph 23, wireless communication system) over a reverse link comprising: determining a loading on the reverse link (page 5, paragraph 50, measures the reverse link pilot quality, congestion); and managing the reverse link loading in response to the determined reverse link loading by at least one of controlling a traffic channel data rate and controlling a number of

active connections (page 6, paragraph 61, scheduling; signal strength estimations, C/I measurements).

Referring to **claim 22**, Sarkar discloses the method of Claim 21, comprising: broadcasting an availability of resources message in response to the determined reverse link loading (page 7, paragraph 71, respond to request; also, page 7, paragraph 74, maximum value allowed).

Referring to **claim 24**, Sarkar discloses the method of Claim 23, wherein the managing the reverse link loading is performed in response to an average of a rise in a received signal strength indication and filtered loading estimation, the average comprising at least one of a relatively shorter term and a relatively longer term average (page 6, paragraph 61, scheduling; signal strength estimations, C/I measurements).

Referring to **claim 25**, Sarkar discloses the method of Claim 22, wherein the step of determining a loading on the reverse link comprises: sampling the received signal strength indication (page 15, paragraph 152, various parameters stored, adjusted, determined, fixed); and calculating a noise floor and the rise in the signal strength indication in response to the sampling of the received signal strength indication (page 15, paragraph 152, various parameters stored, adjusted, determined, fixed; page 7, paragraph 70, minimum quality of service guarantees, available transmit power, reduce signal to noise ratio).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 23 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. App. Pub. No. 2004/0160914 to Sarkar in view of U.S. Pat. App. Pub. No. 2002/0136192 to Holma et al.

Referring to **claims 10 and 18**, Sarkar discloses the method and the wireless communication system of claims 9 and 17 respectively (page 7, paragraph 71, respond to request; also, page 7, paragraph 74, maximum value allowed). Sarkar does not disclose that the availability of resources message comprises a reverse activity bit. The examiner maintains that the concept that the availability of resources message comprises a reverse activity bit was well known in the art as taught by Chung et al.

In a similar field of endeavor, Chung et al show sending a reverse activity bit (page 2, paragraph 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sarkar to show that the availability of resources message comprises a reverse activity bit, as taught by Chung et al, the motivation being determining an optimal rate using the reverse activity bit (Chung et al, page 2, paragraph 17).

5. Claim 23 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. App. Pub. No. 2004/0160914 to Sarkar in view of U.S. Pat. App. Pub. No. 2002/0136192 to Holma et al.

Referring to **claim 23**, Sarkar discloses the method of Claim 22 (page 6, paragraph 61, scheduling). Sarkar does not disclose that the step of controlling a traffic channel comprises a relatively faster control of the traffic channel and the step of controlling a number of active connections comprises a relatively slower control. The examiner maintains that the concept of controlling a traffic channel comprising a relatively faster control of the traffic channel and the

step of controlling a number of active connections comprising a relatively slower control was well known in the art as taught by Holma et al.

In a similar field of endeavor, Holma et al show that fast power control is used for modifying transmission power and that slow power control is used for data retransmissions, i.e. connections (page 4, paragraph 51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sarkar to show that the step of controlling a traffic channel comprises a relatively faster control of the traffic channel and the step of controlling a number of active connections comprises a relatively slower control, as taught by Holma et al, the motivation being an optimal power control method depending on the different services (Holma et al, page 1, paragraph 8).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to Reverse Links.

U.S. Pat. App. Pub. No. 2002/0052204 to Bender et al

U.S. Pat. App. Pub. No. 2002/0167933 to Feli et al

U.S. Pat. App. Pub. No. 2004/0219917 to Love et al

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suhail Khan whose telephone number is (571) 272-7910. The examiner can normally be reached on M-F from 8 am to 4:30 pm. If attempts to reach the

examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold, can be reached at (571) 272-7905.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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